



California's Health

JUN 6 1961

PUBLIC HEALTH
LIBRARY

Vol. 18, No. 22 • Published twice monthly • May 15, 1961

HISTORICAL REVIEW OF CALIFORNIA'S TUBERCULOSIS SUBSIDY*

EDWARD KUPKA, Chief, Bureau of Tuberculosis, California State Department of Public Health †

California's tuberculosis subsidy is now a little over 45 years old. The motivation to create a subsidy grew out of several factors, most important of which was the failure of the Governor of the State to permit the erection of a state tuberculosis sanatorium, or of state sanatoria. Beginning in the '90s and with increasing tempo in the years before World War I, state governments built tuberculosis sanatoria all over our country. The first one was at Rutland Heights in Massachusetts in 1896, and this pioneer was followed by others; eventually most of the states had built one or more institutions. The movement, of course, eventually reached California. A group of doctors got together and promoted a bill to create a tuberculosis sanatorium; this was introduced in 1905. Somewhat surprisingly, the Governor vetoed the bill. The political situation was such that no attempt to override the veto was made. It is odd that the Governor who vetoed the bill was Dr. George C. Pardee, the only physician ever to serve California as Governor.

Influx of Tuberculosis

At that time California was sheltering many a tuberculosis patient sent here (and to other southwestern areas) by eastern physicians. Many came seeking a cure, and many of them died here. This was a matter of great concern to local governments. Where could these infected people go? Some lived "in the desert". Some went into tent colonies. In 1920 a study made in the City of Los Angeles showed that of the 4,000 persons with

tuberculosis known to be in the city, over 2,000 had arrived within the previous six months. Such a situation, duplicated elsewhere in Southern California, called for the building of institutions if only to give custodial shelter, and some of the counties began to build open cottage-type institutions, usually of light construction, to supplement the many private sanatoria and nursing homes that had sprung up. The state sanatorium was intended to help this situation. This failed, but enough backlash of sentiment continued to result in the creation of a tuberculosis commission, which in 1911 began study of the problem. Its report led to the creation of the State Bureau of Tuberculosis in 1913, and shortly after, in 1915, to the passage of a tuberculosis subsidy law to assist the counties, in lieu of a state sanatorium.

Early Subsidy

A very important person in this campaign was Mrs. Edith Tate Thompson, who first headed the Bureau of Tuberculosis, and who was simultaneously director of the California Tuberculosis and Health Association as well. She had several offices about the state, and possessed great energy. The State Bureau of Tuberculosis was given the task of administering the new subsidy.

At first, the subsidy was \$3 per patient-week. Tuberculosis care in those days was largely custodial, and the sanatorium buildings were planned with the open-air treatment in mind. Therefore, they were usually of a cottage-type with large screened porches, and not very expensive to build or operate. This was before

x-ray, laboratories, and surgery were being used, and so the \$3, although it seems a very small contribution now, paid a substantial part of the cost of running a tuberculosis institution then.

An important consideration is that the legislature by passing this subsidy act set the policy of the State's participation in the support of county tuberculosis institutions, and that it chose this method against the almost universal pattern followed by the other states, which built and maintained state institutions.

The subsidy began to be paid in 1915, and the first full fiscal year was 1915-16.

Many Sanatoria Built

The second chapter of the subsidy story also had a dramatic flavor. Mrs. Thompson made it her mission to get as many sanatoria built by California counties as possible. She travelled up and down the state; she possessed and used both personal charm and political influence, the latter manifested via women's clubs. In her forceful way, she influenced many county supervisors to begin thinking about building sanatoria and eventually to get them built. In the period between the World Wars, thousands of tuberculosis beds were set up all over the state. To determine what kind of institution would qualify, a set of regulations was created in 1917, revised in 1929, and again in 1946. These are to be found in the Administrative Code; they outline the requirements, covering type of building, laboratories, supplies, ratio of nurses, medical staffing, food service standards, fire precautions, etc. It is important to

* Excerpts from a presentation before the State Tuberculosis Subvention Committee, June 28, 1960.

† Now on a two-year leave serving the World Health Organization.

remember that originally the regulations were relaxed and liberal, and the rather scanty institutions characteristic of that day could qualify; later, as time went on, diagnosis and treatment became more complicated, and the regulations became more elaborate. The regulations are now almost identical to those used for state licensure of private tuberculosis hospitals. Each time the regulations were tightened, the old institutions would be "blanketed in," but in time these largely came up to standard.

The number of institutions and beds reached a peak in 1953. No new building was possible during and immediately after the war, so the late '40s and early '50s was a time of catching up, much of the construction being to replace antiquated buildings or institutions. There was more tendency for small counties to combine with or contract with large counties; for example, a new institution like Cascade Sanatorium was originally built by four counties and now supplies ten counties in Northern California with tuberculosis bed care.

Subsidy Raises Standards

The second concept, then, is that the granting of the subsidy was tied to certain standards, so that a building had to be of a certain type of construction, a county had to have 'x' doctors, 'x' nurses, 'y' equipment, etc., in order to qualify. The result was that at times in the history of the subsidy, a board of supervisors might not be willing to modernize, in order to bring the facility up to standard. The unpleasant necessity of threatening to take the county off subsidy usually resulted in the necessary improvements. On several occasions subsidy was stopped. Thus it has been used as a sort of a lever, but never as a whip, to improve standards. In this respect we can be proud of our county institutions, which by and large are excellent, and compare well with those around the country. They are, of course, of all sizes depending on the size and number of supporting counties, and some are still located in sparsely populated areas like Springville and Weimar. But the newest ones to be built or improved are at the population centers, where they should be.

Patient Days Decline

After 1953, as the waiting lists gradually disappeared and the bed occupancy lessened, the total patient days have steadily declined. The bed-

day total will be less than 1,200,000 for the fiscal year 1959-60, from a high of 2,341,000 in 1951-52. There is every prospect of a continuing decline in the near future. As a result of the decline, some institutions have been abandoned, some converted a wing (or if they had more than one building, converted one of the buildings) to other purposes, and some left the oldest part of the institution empty and used only the newest part. At the present time about 4,000 county beds are still in use and their occupancy averages about 70 percent, instead of the former 90 percent.

Agitation by the Supervisors Association to have the subsidy increased bore fruit in 1945. At intervals subsequently and until 1957, subsidy has been progressively increased by separate legislative action, and each time the increase had to be justified anew to the Department of Finance, the Governor, and the Legislature. It must be stated that it did not seem to be very difficult to either justify or procure these increases, and the Legislature has treated the tuberculosis subsidy with generosity.

"Escalator" Clause

In 1957, the "escalator clause" was introduced into the law. The current per diem hospital costs, ascertained by the State Department of Public Health, now govern the increase to take place under the "escalator clause".

Attention should be called to another variant in setting the size of the subsidy. Beginning in 1947, the counties were divided into classes according to the size of its tuberculosis hospitalization needs, and the larger per diem payments were made to the smallest counties, according to a sliding scale.

The fourth point then is that the amounts were formerly based on separate legislative action, and had been increasing steadily for a number of years; more recently the increases have been put in as budget items on an "escalator" basis. The escalator clause too has met with no difficulty in the legislature.

Tuberculosis Units Licensed

For a long time after the Bureau of Hospitals was created in the State Department of Public Health, certain categories of hospitals, or hospital units, were not put under licensure. These included psychopathic units, custodial units, and tuberculosis units,

which were to be supervised from a state level by the State Department of Mental Hygiene, the State Department of Welfare, and the State Health Department's Bureau of Tuberculosis, respectively. A year and a half ago, the hospital licensure law was broadened to include county tuberculosis hospitals and units, and since then, these have also been subject to regular inspection and approval by the inspectors of the State Health Department's Bureau of Hospitals. In previous years, these inspectors had inspected them anyway as a matter of courtesy and in response to the desire of the hospital administrator, but now their role has become official and licensure as well as subsidy depends upon satisfactory compliance with regulations. However, since the subsidy regulations mirror the licensure requirements, there is no conflict.

Per Diem Costs Increase

As bed usage has decreased, per diem costs have been increasing. Both trends will continue and for a while will neutralize each other, resulting in a relatively stable total amount of subsidy to be paid each year. But inevitably the bed use decline will predominate and the annual subsidy total too will decline. This brief historical outline has shown how the tuberculosis subsidy in California came to reach its present place in the fiscal picture.

Mrs. Ernest Lilienthal Appointed to State Board

Governor Edmund G. Brown has appointed Mrs. Ernest Lilienthal of San Francisco to the State Board of Public Health for a term ending January 15, 1965.

Mrs. Lilienthal served in 1960 on the Governor's Committee on the Study of Medical Aid and Health in California. She graduated magna cum laude in economics from Stanford University where she won Phi Beta Kappa honors. Prior to her marriage she worked as an economist.

Mrs. Lilienthal replaces Mrs. P. D. Bevil of Sacramento whose term expired January 15, 1961. Mrs. Bevil is past president of the California Congress of Parents and Teachers and has been active on committees and conferences concerned with youth and education. She has served two terms on the State Board, and in 1955 was elected Vice President of the Board, a position she has held since.

EPIDEMIOLOGIC NOTES

Food Poisoning Outbreaks Involving Fish 1954-1960

During the seven years 1954 through 1960, the California State Department of Public Health has received 15 reports of food poisoning outbreaks involving fish. Considering the size of the fish catch and the extent of the commercially prepared fresh, pickled, smoked and canned fish in California each year, this is a small number of outbreaks. Further study of the reported outbreaks shows that a large number of those reported are from fish caught by sport fishermen and processed at dockside by very small commercial establishments. Since the waters off California, in the Gulf of California and the ocean off Baja California are excellent fishing areas, tremendous numbers of fish are caught by sportsmen, yet in spite of rather questionable practices of cleaning, filleting, transporting without refrigeration, and do-it-yourself smoking at home, food poisoning due to fish caught by individuals has been reported rarely.

Reports Summarized

Of the fifteen reported outbreaks, three have been excluded from this report because:

1. Two were due to extremely poor restaurant sanitation practices.
 - a. Fish were kept in the kitchen without refrigeration seven days before serving.
 - b. There was a laboratory diagnosis of coagulase positive staphylococcal contamination.
2. One involved tuna salad which was unrefrigerated for several days and used for sandwiches until finally consumed.

The remaining 12 outbreaks involving 82 ill persons bring out some striking points.

- a. All were reported by Los Angeles City or County Health Departments.
- b. In only one outbreak was a known bacterial pathogen recovered in the laboratory.
- c. Three of the outbreaks were allegedly caused by sports fish smoked by the same commercial concern, two in 1954 and one in 1957.
- d. Reports of nine of the outbreaks stated that persons had experienced immediate (1-15 minutes)

flushing of the face after eating prepared fish. Four of these also reported individuals in the group had tingling sensations of the tongue and mouth.

- e. In all but one of the reported episodes, symptoms of nausea, vomiting and/or diarrhea began between 15 minutes and one and one-half hours in some of the persons who ate the fish.

The etiology was given on the reports over the seven-year period as "food poisoning", "scombroid", "staphylococcus", "scombroid ichthyosarcotoxin" and "unknown". In most of outbreaks investigated in local departments, samples were sent to the laboratory but in only one in five were any bacteria reported, and only in one in 1955 was a known pathogen recovered. One occurrence in 1954 was reported from the chemical examination as "high organic nitrogen content." Since 1958, little laboratory investigation has been made because of lack of specific test procedures in either the local health departments or in the State laboratories.

Considerable literature has been published on the subject of classification of fish poisoning due to specific toxic substances. However, the clinical syndrome described for the majority of these outbreaks has not been accurately defined by specific etiology. The actual causative substance, whether the results of bacteriological decomposition of fish proteins or to chemical changes in the tissues from physical or environmental factors, has not been determined.

A recent communication from the Minnesota Department of Health reported two proven deaths from botulism from lake fish commercially smoked and vacuum packed in plastic bags. This is now a widespread commercial practice, and these products are available in California markets. Improper handling of smoked and cold packed smoked fish has been noted in small commercial establishments along the California coast fishing areas.

Recommendations

It is recommended that:

1. Local health departments in all areas report all food poisoning outbreaks due to fish when they are brought to their attention.

2. That complete epidemiology be done. If epidemiologic study leads into areas needing substantiation by laboratory work, portions of food involved should be taken as samples. Samples taken should be sent to the local health department laboratory with specific request for tests which the epidemiologic investigation indicates are needed. The laboratory director should contact the appropriate State Department of Public Health Laboratory if the work cannot be done locally. If there is no local laboratory, the appropriate State Department of Public Health Laboratory should be contacted directly.
3. That local health departments establish standards for processing sport fish at dockside commercial establishments with particular reference to refrigeration before processing, temperatures for smoking, and sanitary packaging of the finished product.

EDMUND G. BROWN, Governor
MALCOLM H. MERRILL, M.D., M.P.H.
State Director of Public Health

STATE BOARD OF PUBLIC HEALTH

CHARLES E. SMITH, M.D., President
San Francisco

L. S. GOERKE, M.D., Vice President
Los Angeles

DAVE F. DOZIER, M.D.
Sacramento

ERROL R. KING, D.O.
Riverside

MRS. ERNEST LILIENTHAL
San Francisco

HERBERT A. LINTS, M.D.
Escondido

ARTHUR E. VARDEN, M.D.
San Bernardino

HENRY J. VOLONTE, D.D.S.
Hillsborough

STEPHEN I. ZETTERBERG
Claremont

MALCOLM H. MERRILL, M.D.
Executive Officer
Berkeley

STATE DEPARTMENT OF PUBLIC HEALTH
BUREAU OF HEALTH EDUCATION
2151 BERKELEY WAY
BERKELEY 4, CALIFORNIA

Requests for single copies or for placement on the mailing list may be made by writing to the above address.

Entered as second-class matter Jan. 25, 1949, at the Post Office at Berkeley, California, under the Act of Aug. 24, 1912. Acceptance for mailing at the special rate approved for in Section 1103, Act of Oct. 3, 1917.

Dr. Roy O. Gilbert Retires; Dr. Sutherland Replaces Him



Roy O. Gilbert, M.D.

Roy O. Gilbert, M.D., has retired as Los Angeles County health officer, after 31 years of service with the Los Angeles County Health Department. First appointed as "hygiene physician" in 1930, Dr. Gilbert became a district health officer in 1934, assistant health officer in 1939, and health officer in 1946.

Dr. Gilbert studied sanitary engineering at the University of Toulouse and took a degree in civil engineering from the University of Minnesota. In 1924 he received the M.D. degree from the University of Michigan and practiced medicine in Long Beach prior



Kenneth H. Sutherland, M.D.

to joining the Los Angeles County Health Department staff.

Effective May 2, Kenneth H. Sutherland, M.D., became Los Angeles County health officer. During his more than 20 years of service with the county, he has held the positions of chief deputy health officer, assistant health officer and, after Dr. Gilbert's retirement on April 10, health officer *pro tempore*.

Dr. Sutherland received his M.D. degree from the University of Minnesota and previously served as health officer for Orange County in 1939.

PROGRAM BRIEFS

Glaucoma Detection Center

As a joint endeavor with the Santa Clara County Medical Society, the San Jose City Health Department now operates a glaucoma detection center for any resident in the community. The center, open twice weekly, is operating at capacity. Such a program as this for many more communities is a goal of the Prevention of Blindness Program, State Department of Public Health.

Hard Core Families Reached by Interviews on Same Day as Clinic

Interviews with a small group of "hard core" families in North Richmond, Contra Costa County, were found to be successful in stimulating a majority of these families to attend an immunization clinic held on the same day of the interview. These families had not come in for immunization earlier in spite of a great deal of special education and promotion in the area.

The interviews were done just prior to one of the special evening clinics. This was done so that if the people made a decision to act, they could be immunized soon and as conveniently as possible. Interviews held three days before the clinic were ineffective.

Results of the study suggest that the lower health comes on a person's list of necessities, the closer the reminder must come to the time for action.

Los Angeles Requires Pool Service Certification

Anyone servicing pools for pay in the City of Los Angeles must now be certified by the health department. Certification, now a legal requirement, is based on a written examination and a performance test covering procedures for the addition of chemicals, servicing of equipment, testing of water, and other health aspects of pool maintenance.

Tests will be given every two months until the need for such frequency is reduced. Individuals are responsible for applying for certification to the health department.

Football Dental Injuries Reduced in Contra Costa

In Contra Costa County, dental injuries due to high school football were reduced from an average of 25 injuries a year to a total of only two injuries during a two-year pilot program of protection.

A series of conferences initiated by the Contra Costa Dental Society led

Mussel Quarantine Declared

The annual quarantine of mussels for human consumption has been declared by the State Board of Public Health as a protection from the highly toxic poison present in the shellfish during the summer and early autumn.

The quarantine, established along the entire California coastal shore, including all bays, inlets, and harbors, will be in effect from May 1st to October 31st. Local health departments serving the coastal and bay counties are posting quarantine warnings covering both mussels and clams.

Mussels may be used for bait during the quarantine period, but must be broken open and placed in containers plainly labeled, "Mussels may contain poison. Unfit for human food."

Strict caution should be observed in the preparation of clams for summer meals during this period. Clams should be cleaned and washed

thoroughly before cooking, and all dark parts, where the poison concentrates during the May-October period, should be discarded. Only the white meat should be eaten. In addition, clams should be taken only from areas free from sewage contamination.

The poison, found in plankton which serves as food for mussels and clams, is an alkaloid similar to strychnine and can prove fatal to persons eating the toxic shellfish.

Glaucoma is a major cause of blindness in the United States, responsible in 1957 for about 45,700 cases, or 13.4 percent of the total. It is estimated that another 150,000 have become partly blind from this disease, and that about 2 percent of the U.S. population 40 years of age and over, has the disease and more than half of these are unaware of it. *Progress in Health Services, Health Information Foundation, September 1960.*

school district administrators to make protective mouthguards a standard item of uniform. They were worn during practice sessions and games for two seasons, 1959-60 and 1960-61. Approximately 1750 players were fitted with mouthguards during the two years. Not only were the injuries reduced in number, but the two that did occur were less serious than they would have been without protection. The mouthguards became well accepted by the players.

Further information on this program may be secured from the California Interscholastic Federation, 1521-A Shattuck Avenue, Berkeley, or from Lee R. Winters, D.D.S., 2903 Salvio Street, Concord, California.

Audiometry Summer Session Courses Announced

The following colleges and universities in California have announced 1961 summer session courses in audiometric testing which will meet the present training requirements for the certificate of registration as school audiometrist and will also satisfy the audiometry and aural rehabilitation requirement for the special education credential in speech therapy and lip reading:

Long Beach State College—Speech 163—Audiometry and Hearing Conservation (3 units), June 19 through July 28; **San Jose College**—Speech 175 AS—Rehabilitation of the Hard of Hearing (2 units), June 26—August 4; **University of California (Education Extension)**—X302AB, Audiometric Testing and Hearing Conservation (2 units), Monday through Friday, 9-12 M. June 19—June 30; **San Francisco State College**—Ed s163.2—Audiometry and Hearing Disorders (3 units), June 26—August 4; **Occidental College**—Speech s188, Aural Rehabilitation (3 units), June 19—July 7; **Whittier College**—Speech 151—Audiometry and Aural Rehabilitation (3 units), June 19 to July 28.

Personals

Dr. Karl F. Meyer, director emeritus of the University of California's George Williams Hooper Foundation for Medical Research, has received this year's Jessie Stevenson Kovalenko Medal for outstanding contributions to medical science. The National Academy of Sciences medal was presented to Dr. Meyer in Washington, April 24, in recognition of his achievements as an investigator, teacher, and administrator for over half a century.

State Support Needed to Combat Phenylketonuria

The State Legislature is now considering covering future needs in the State for victims of phenylketonuria (PKU) as part of the Crippled Children Service after July 1. The cost of detecting the disease early and preventing mental retardation in these children appears to be less than \$5,000 per child, compared to present costs to the State of at least \$60,000 per child for the life-long institutional care otherwise required.

Need for state support of special medical care and special diets for children with this disease (which causes permanent mental retardation if not diagnosed soon after birth) has been clearly shown in studies during the past year by the Childrens Hospital of Los Angeles with support from the State Department of Public Health and the U.S. Children's Bureau.

This comparatively rare disease, which develops within six weeks after birth, is caused by congenital inability to metabolize the essential amino acid, phenylalanine. It can be prevented if diagnosis is made early and the child is placed on low phenylalanine diet. In place of meat, fish, eggs, milk, most cereals, and flour, which are relatively high in protein, a synthetic protein substitute has been devised which is an amino acid mixture made from natural protein from which the phenylalanine has been removed.

The cost of the special protein formula necessary to prevent mental retardation, even when provided at cost, is too great a financial burden for most families to bear. Yet if children who have the disease do not continue to receive the formula, progressive brain damage ensues.

Diagnosis is not difficult, and present screening methods are inexpensive enough to be feasible even though few infants have the disease. Twenty-six local California health departments are now participating in detection programs.

Training for Nurse Supervisors of Nursing Homes

The California State Department of Public Health has contracted with Cedars of Lebanon Hospital Rehabilitation Center in Los Angeles for two five-day courses for nurse supervisors of nursing homes with more than 25 beds. The project is supported by funds from the United States Public Health Service 1961 General Health Grant and is one of several activities sponsored by the Department to improve patient care in nursing homes in California.

John Aldes, M.D., Director of the Ben Meyer Rehabilitation Center, Cedars of Lebanon Hospital, is director of the program. The faculty will be made up of specialists in the field of medicine, nursing, and rehabilitation.

The courses will cover techniques and procedures of rehabilitation nursing through demonstration and practice sessions as well as the concepts and principles of supervision and teaching, so that the supervisors will later be able to develop their own training programs in nursing homes.

Attorney General's Opinion

Non-registered sanitarians may not be employed in connection with enforcement of the State Housing Act, with limited exception for assistant sanitarians working under supervision of a registered sanitarian. This is the official opinion of the Attorney General as stated in Opinion No. 60-243 of December 29, 1960.

The opinion was given at the request of the Honorable Jack Schrade, Assemblyman, Eightieth Assembly District, who asked: "May non-registered sanitarians be employed to perform the duties of making general environmental sanitation inspection of apartment houses, hotels, and homes as outlined in the State Housing Act?"

The conclusion is that non-registered sanitarians may not be employed by an agency or officer responsible for enforcing the State Housing Act with the following exception: "An assistant sanitarian may without a certificate of registration be employed to work under the supervision of a registered sanitarian until such time as he may be qualified by examination as provided under Section 542 (b), such time not to exceed two years of such employment."

CALENDAR

June 2—Northern California Public Health Association, Annual Meeting, San Mateo

June 26-29—Western Branch, APHA, Annual Meeting, in conjunction with U.S.-Mexican Border Public Health Association, Annual Meeting, San Diego

Follow-up On Lead Poisoning From Pottery

In the summer of 1960, Dr. Robert Kehoe, director of the University of Cincinnati's Kettering Laboratory and famous for his knowledge of lead poisoning, discovered that pottery made in one California factory had an unstable glaze which appeared to have leached enough lead to cause two cases of lead poisoning. Although the patients recovered and the manufacturer involved stopped production of that type of pottery, the problem of unsafe pottery in general remained.

The local health officer in the area where that particular manufacturing plant is located and the Bureau of Occupational Health of the California State Department of Public Health worked with the company to investigate more completely the solubility of these glazes and checked with the Public Health Service and others the extent of the potential danger. Findings that exposure to acid foods produced levels of lead from these dishes that were many times the generally acceptable level, made it evident that no more of this pottery should be sold to the public. The company offered to credit the wholesale value of unsold dishes if returned to them by dealers. At the end of October, the California Department of Public Health requested all local health departments to see that this material was removed from sale, and at a later date the Public Health Service notified other state health departments, with the result that the information was widely disseminated.

Where possible, the Bureau of Occupational Health did laboratory studies of persons who attributed any gastro-intestinal symptoms to use of this dinnerware. In only one instance, however, were there findings suggestive of excessive lead absorption. (Because of the wide newspaper publicity, most persons had stopped using the dishes from days to weeks before it was possible to reach them for study.)

Two obvious needs in this situation remain:

1. A simple test with which to check the safety of dinnerware.
2. Some legal requirement that dishware not contribute any harmful material to food.

A number of agencies have expressed interest in solving these prob-

lems. A committee of the American Society for Testing Materials had worked for some time on a screening test for the solubility of glazes on dinnerware. Their proposed test was made available to the Department's Air and Industrial Hygiene Laboratory, which is now collaborating with the committee on further simplification and standardization. This, however, is at best a semi-quantitative or qualitative test only. Meanwhile, the U.S. Potters Association and the Lead Industries Association have entered into an arrangement with the Kettering Laboratory to develop a standardized quantitative method of establishing the solubility of hazardous materials in glazes on dinnerware. It is hoped that before long a streamlined qualitative test will be developed also.

The Public Health Service has also been interested in the problem. Unfortunately, there appears to be no current jurisdiction over sale of dishware. The State of Kansas has a household substances regulation which appears to cover dishware. With this as a possible model, it is hoped that some federal or local regulation will develop out of the widespread interest in controlling the safety of dinnerware.

AMA Publishes Health Bulletin for Teachers

A monthly bulletin for teachers of health, the *Health Education Service for Schools and Colleges*, is now being published by the American Medical Association. The first issue appeared in January 1961.

The chief purpose of this service is to provide teachers with authentic, up-to-date health news in concise form. References will be included for those interested in further exploration of topics.

During 1961, the service is operating on an experimental basis with a selected list of instructors receiving the monthly bulletins. Teachers receiving the bulletin who are no longer teaching health have been asked to route their copies to the proper instructors.

Bulletins are prepunched, so they can be retained easily in the instructor's notebook. There is no charge for the service, but those receiving the bulletin will be asked to assist with a brief, periodic evaluation.

California and Malaya Universities Join in Research

A new International Center for Medical Research and Training has been established by the University of California School of Medicine in San Francisco and Malayan institutions at Singapore and Kuala Lumpur, with the close collaboration of U. C.'s School of Public Health at Berkeley and its School of Veterinary Medicine at Davis.

The program will permit greatly intensified investigations of tropical and other diseases that require international collaborative study, and will offer special research training opportunities in the health sciences. Research and teaching will be conducted both in California and in Malaya, where U.C. is collaborating with the University of Malaya Medical School at Singapore and the Institute for Medical Research and a new medical school now being built at Kuala Lumpur.

The California-Malaya program is being established under a grant from the United States Public Health Service, and is headed by Dr. J. Ralph Audy, director of the George Williams Hooper Foundation at the San Francisco Medical Center. The USPHS grant is one of four recently awarded to American universities to work with medical institutions abroad in establishing international centers for medical research and training. Others have been made to Johns Hopkins and Tulane Universities and to the University of Maryland.

Research is already underway both in California and in Malaya, with emphasis on the ways in which community disease patterns change with development of a country and rapid growth of population. This includes socio-medical studies and a broad study of disease in relation to environment. The first research career trainees will enter the program later this year. Typically, a trainee will spend about a year and a half of study at the University of California Medical School, followed by a similar period of research in Malaya.

American families in 1957-58 averaged \$294 as their annual personal consumption expenditures on health, an increase of 42 percent over the comparable amount spent five years earlier.—*Progress in Health Services*, February 1960.

Carbon Monoxide Threat to Pilots Investigated

Carbon monoxide leaking into the cockpit of U.S. Forest Service tanker planes used to combat fires in California's national forests is a threat to pilot and crew, according to a study completed by the Bureau of Occupational Health of the State Department of Public Health.

The study was requested by the U.S. Forest Service after several aircraft accidents of indeterminate cause occurred last summer during the fire-fighting season. A review of the possible causes led to consideration of the possibility of carbon monoxide poisoning as a significant contributing factor to these otherwise unexplainable crashes or accidents.

Further need for investigation was indicated when a carbon monoxide indicator confirmed the presence of carbon monoxide in one of the tanker planes used for spreading fire retardant chemicals.

Engineers of the Department's Bureau of Occupational Health then took a series of atmospheric samples from three planes, two converted World War II Navy torpedo bombers, and a T34 observation plane. Tests of samples taken from the single-engine tankers exceeded more than twice the maximum acceptable concentration of 50 parts per million for carbon monoxide, which is recognized as the maximum acceptable level by the Federal Aviation Agency.

The carbon monoxide escapes through cracked engine exhaust pipes and manifolds and from other loosely jointed parts of the engine. It seeps into the cockpit of the old war surplus craft along the fuel lines and cracks in the floor boards.

In its report to the Forest Service the Bureau recommended the development of methods for reducing carbon monoxide concentrations in the pilot's compartment at least to the levels recommended by the Federal Aviation Agency. Hence, additional work to disclose more clearly the source of entry of the carbon monoxide and effective methods for keeping it out of the cockpit, are indicated.

In view of the close proximity of the fire season, and the improbability of finding a satisfactory remedy for this problem before the season starts, it was further recommended that con-

Major Findings Reported in Heart and Lung Disease

Many significant advances against circulatory and respiratory disease are summarized in a newly released report on the second year of work in the Cardiovascular Research Institute at the University of California Medical Center.

Among important findings of the past year are these: measurements that may make it possible to predict lung failure in the newborn in the first half-hour of life; new techniques for measuring the output of blood from the heart in many situations, including simulated coronary occlusions; new understanding of how cells maintain mineral balance, which is basic to many life processes; major studies of recently discovered zones in the brain that seem to have an important influence on regulation of breathing; application in open-heart surgery of special apparatus that quickly discloses unsuspected defects in respiration and gas exchange in the blood.

Work of the Cardiovascular Research Institute, directed by Julius H. Comroe, Jr. M.D., is supported by many groups and agencies both public and private. Voluntary health organizations that assisted the Institute in 1960 included the American Heart Association and Alameda, Fresno, Monterey, Sacramento, San Francisco and Yolo County Heart Associations; the American Cancer Society; the California Tuberculosis and Health Association and the San Francisco Tuberculosis Association; the Arrowhead Area Health Foundation, and the Muscular Dystrophy Association.

consideration be given to some type of personal protection for the pilots.

The Bureau also urged consideration of the advisability of providing more comprehensive medical and industrial health services for the fire protection program as a whole. The numerous hazards encountered in the carrying out of activities of the fire fighting program and the large number of personnel carrying out this work during the summer season, indicate that provision of preventive medical and industrial health services should serve to disclose and eliminate many unnecessary hazards and accidents.

Ten-Year Study Reveals Clues To Coronary Heart Disease

According to a study known as the Los Angeles Heart Study, now in its tenth year, three factors appear to be associated with an increased risk of coronary heart disease. They are:

1. An elevation in blood pressure.
2. A family history of heart disease.
3. Elevated blood cholesterol.

The study has been carried out under the direction of Dr. John M. Chapman of the School of Public Health at the University of California, Los Angeles, together with Drs. L. S. Goerke and Leo G. Reeder, assisted by Mrs. Anne Coulson and others. It is a cooperative study with the National Heart Institute of the U. S. Public Health Service, the California State Department of Public Health, and local agencies.

The project consists of a study of 1,859 men now or previously employed by the City of Los Angeles. These men, ages 20-70 at the initiation of the study, were in all types of jobs ranging from heavy manual labor to desk jobs. They received detailed examinations between 1950 and 1954 and since that time have been contacted annually to determine whether or not heart disease has been diagnosed by their personal physicians.

During the decade, 135 have died from various causes, including 59 from coronary heart disease. A total of more than 100 cases of this disease has occurred, including the fatal cases. The incidence is highest among the men who had high blood pressure, a family history of heart disease, or elevated blood cholesterol.

There did not appear to be any relationship between the type of work or socio-economic status of the individual in the development of heart disease. The disease struck alike among those in executive positions and in unskilled labor, among those in sedentary jobs and those involving heavy exercise.

Houseflies have an adaptable enzyme system that changes from one generation to another and lets these house pests resist men's insecticides, the New York State College of Agriculture, Cornell University, reported.—*Science News Letter*, Vol. 77, No. 25.

Public Health Positions

Humboldt-Del Norte County Health Department

Director of Public Health Nursing: Salary range, \$519-\$649; starting level negotiable and automatic step increase after first six months. Generalized program in semi-rural, bi-county jurisdiction in Redwood Empire on Pacific Coast serving population of 125,000. California PHN certification and administrative experience required. Nursing staff of 15 including supervisor. 37½ hour work week.

Public Health Nurse: Salary range \$439-\$549; advance to second step after six months. County car furnished. Generalized program, including school nursing. Requires California PHN certificate.

Registered Staff Sanitarian: Salary range \$439-\$549; advance to second step after six months. Generalized program; requires California registration. County car furnished. Work week is 37½ hours.

Apply—L. S. McLean, M.D., Health Officer, Humboldt-Del Norte County Health Department, 805 Sixth Street, Eureka, California.

Kern County

Public Health Nurses: Salary range, \$433-\$527. Starting salary depends upon qualifications. California PHN certificate required. Generalized program includes school nursing. Health insurance and social security combined with liberal retirement plan. For information and application forms write to DeWitte T. Boyd, M.D., Health Officer, Kern County Health Department, P.O. Box 997, Bakersfield, California.

San Mateo County

Public Health Educator: Salary range, \$519-\$649. One year graduate study in public health and one year experience required. Examination date: June 24, 1961. Closing date for filing, June 12, 1961. Contact Civil Service Commission, Court House, Redwood City.

Sonoma County

Public Health Nurse: Salary range, \$429-\$515. Requires California RN and PHN cer-

tificates. Excellent working conditions, 15 days annual vacation and 12 days sick leave.

Public Health Microbiologist: Salary range, \$429-\$515. Possession of a Public Health Microbiologist certificate issued by the California State Department of Public Health is required.

Health Analyst: Salary range, \$449-\$539. Candidates may qualify to start at second or third step. Minimum qualifications: graduation from an accredited college or university with specialization in statistics in public health or a closely related field, and some full-time, paid experience in technical work with statistics desirable.

For more information about these positions write: Sonoma County Civil Service Commission, Room 110, County Administration building, 2555 Mendocino Avenue, Santa Rosa.

Stanislaus County

Director of Public Health Nursing: Salary range, \$505-\$613. Starting salary depends on qualifications. Generalized program in community two hours drive from San Francisco Bay area, mountain resorts, ocean beaches. Pleasant working conditions and employee benefits. New health building under construction. Must have or be eligible for California PHN certificate. Five years public health nursing experience required. Contact Personnel Office, Stanislaus County, P.O. 639, Modesto, California.

State of California

Public Health Nurse: Salary range, \$505-\$613. Appointment may be possible above first step. Employment with the State Department of Public Health for assignment to Amador, Trinity, Lake or other county contracting with the State for public health services. Transportation furnished; liberal personnel benefits. Opportunities for progressive program development in rural communities. Requirements: two years of experience in a generalized public health program and completion of college program approved for public health nursing.

For details write to Miss Corrine Hall, Supervisor of Public Health Nursing, Bu-

reau of Public Health Contract Services, California State Department of Public Health, 2151 Berkeley Way, Berkeley 4, California. Application forms may also be obtained from the California State Personnel Boards, 801 Capitol Avenue, Sacramento; or the branch offices at 515 Van Ness Avenue, San Francisco; or 107 South Broadway, Los Angeles. Qualifying examination is scheduled for May 27, 1961.

Tulare County

Therapist—(Physical Therapist preferred but Occupational Therapist acceptable). Salary range, \$392-\$491. Starting salary will depend upon experience. To work with handicapped and cerebral palsied children in a well-equipped public school. Group health insurance. Social Security and retirement benefits. Contact Clark Richardson, M.D., Health Officer Tulare County Health Department, County Civic Center, Visalia, California.

"Women weigh less and men weigh more than a generation ago. Men with weights 20 pounds above average incur a penalty of about 10 percent higher mortality, and those 25 pounds above are subject to 25 percent excess mortality. Men with weights 50 pounds above average are associated with an excess mortality of up to 50 or even 75 percent. Women were found to stand added weight better than men. Lowest mortality at ages over 30 in both sexes is among those 15-20 pounds below average weight.

"These are some of the many findings of the largest statistical investigation undertaken in the health field. Results were published by the Society of Actuaries under the title *Build and Blood Pressure Study, 1959*."—*The AMA News*, November 2, 1959.

Documents Division
General Library
Univ. of Michigan
Ann Arbor, Mich.

st
an
m
H
el
op
de
w
ta
ec
se
D
he
L
ad
be
ca
m

ch
im
is
pe
U
TY
ha
m
pe
so
le
pc
di
m

Sc
on
m
ev
hi
a